

We Claim:

1 1. A surface mount crossover component for crossing a conductor line over another
2 conductor line printed on an integrated circuit, comprising:
3 a lowermost first dielectric layer;
4 a ground plane layer disposed above said first dielectric layer;
5 a second dielectric layer disposed above said ground plane layer; and
6 at least one conductor line disposed above said second dielectric layer, said
7 conductor line traversing said second dielectric layer to provide an electrical path from one
8 end of the crossover component to an opposed end thereof;
9 wherein said dielectric layers and said ground plane layer electrically and
10 capacitively isolate, respectively, said conductor line from the conductor line printed on the
11 integrated circuit, such that current flowing through the crossover component via said
12 conductor line encounters no substantial interference from current flowing through the
13 conductor line printed on the integrated circuit.

1 2. The surface mount crossover component of claim 1, further comprising an input
2 termination contact in electrical communication with an input end of said conductor line
3 and an output termination contact in electrical communication with an output end of said
4 conductor line, wherein said ground plane layer is electrically isolated from said termination
5 contacts.

1 3. The surface mount crossover component of claim 1, further comprising a second
2 conductor line disposed above said second dielectric layer spaced laterally from said

3 conductor line, said second conductor line traversing said second dielectric layer to provide
4 a second electrical path from one end of the crossover component to an opposed end
5 thereof.

1 4. The surface mount crossover component of claim 3, further comprising a first input
2 termination contact in electrical communication with an input end of said conductor line, a
3 first output termination contact in electrical communication with an output end of said
4 conductor line, a second input termination contact in electrical communication with an input
5 end of said second conductor line, and a second output termination contact in electrical
6 communication with an output end of said second conductor line, wherein said ground plane
7 layer is electrically isolated from said termination contacts.

1 5. A surface mount crossover component, comprising:
2 a functional surface mount component including a first conductor line;
3 a ground plane layer disposed on one of opposite major surfaces of said functional
4 surface mount component;
5 a dielectric layer disposed adjacent said ground plane layer; and
6 at least one second conductor line disposed adjacent said dielectric layer, said
7 second conductor line traversing said dielectric layer to provide an electrical path from one
8 end of the crossover component to an opposed end thereof;
9 wherein said dielectric layer and said ground plane layer electrically and
10 capacitively isolate, respectively, said first and second conductor lines from one another,
11 such that current flowing through the crossover component via said second conductor line

12 encounters no substantial interference from current flowing through said first conductor
13 line.

1 6. The surface mount crossover component of claim 5, further comprising an input
2 termination contact in electrical communication with an input end of said second conductor
3 line and an output termination contact in electrical communication with an output end of
4 said second conductor line, wherein said ground plane layer is electrically isolated from said
5 termination contacts.

1 7. The surface mount crossover component of claim 5, further comprising a third
2 conductor line disposed adjacent said dielectric layer spaced laterally from said second
3 conductor line, said third conductor line traversing said dielectric layer to provide a second
4 electrical path from one end of the crossover component to an opposed end thereof.

1 8. The surface mount crossover component of claim 7, further comprising a first input
2 termination contact in electrical communication with an input end of said second conductor
3 line, a first output termination contact in electrical communication with an output end of
4 said second conductor line, a second input termination contact in electrical communication
5 with an input end of said third conductor line, and a second output termination contact in
6 electrical communication with an output end of said third conductor line, wherein said
7 ground plane layer is electrically isolated from said termination contacts.

1 9. A surface mount crossover component comprising first and second conductor lines
2 electrically isolated from one another by an interposed dielectric layer and capacitively

3 isolated from one another by an interposed ground plane layer, wherein current flowing
4 through the crossover component via one of said conductor lines encounters no substantial
5 interference from current flowing through the other one of said conductor lines.

1 10. The surface mount crossover component of claim 9, wherein said first conductor line
2 extends in a first direction within a first plane, said second conductor line extends in a
3 second direction within a second plane, and said first direction crosses said second
4 direction.

1 11. The surface mount crossover component of claim 10, wherein said first direction
2 crosses said second direction at an angle of about 90°.

1 12. A surface mount crossover component, comprising:
2 a bottom ground plane layer;
3 a first dielectric layer disposed above said bottom ground plane layer;
4 at least one first conductor line disposed above said first dielectric layer;
5 a second dielectric layer disposed above said first conductor line;
6 an internal ground plane layer disposed above said second dielectric layer;
7 a third dielectric layer disposed above said internal ground plane layer;
8 at least one second conductor line disposed above said third dielectric layer;
9 a fourth dielectric layer disposed above said second conductor line; and
10 a top ground plane layer disposed above said fourth dielectric layer;

11 wherein a current flowing through said surface mount crossover component via one
12 of said first and second conductor lines encounters no substantial interference from current
13 flowing through the other one of said first and second conductor lines.

1 13. The surface mount crossover component of claim 12, wherein said first conductor
2 line extends along a first direction and said second conductor line extends along a second
3 direction crossing said first direction.

1 14. The surface mount crossover component of claim 12, further comprising a first input
2 termination contact in electrical communication with an input end of said first conductor
3 line, a first output termination contact in electrical communication with an output end of
4 said first conductor line, a second input termination contact in electrical communication
5 with an input end of said second conductor line, and a second output termination contact in
6 electrical communication with an output end of said second conductor line.

1 15. A surface mount crossover component of claim 14, wherein said component is
2 generally the shape of a parallelepiped with said first input and output termination contacts
3 arranged along one pair of diagonally opposed corners of the crossover component, and the
4 second input and output termination contacts arranged along the other pair of diagonally
5 opposed corners of the crossover component.

1 16. The surface mount crossover component of claim 14, wherein said ground plane
2 layers are electrically isolated from said termination contacts.